

WHAT WE CLAIM IS:

1. A method of encoding audio visual media signals characterised by the steps of:
 - (i) receiving a videoconference transmission from a computer network, said videoconference transmission including at least one audio visual signal and at least one protocol signal, and
 - (ii) reading one or more protocol signals, and
 - (iii) applying a selected encoding process to a received audio visual signal, said encoding process being selected depending on the contents of said at least one protocol signal read.
2. A method of encoding as claimed in claim 1 further characterised by additional subsequent step of:
 - (iv) producing encoded output for a software player application,
3. A method of encoding as claimed in claim 2 wherein the encoded output provided is adapted to be played to users not directly participating in the videoconference.
4. A method of encoding as claimed in any one of claims 2 or 3 which is adapted to provide an encoded output file or files.
5. A method of encoding as claimed in claim 2 or 3 which is adapted to provide an encoded output transmission.
6. A method of encoding as claimed in any one of claims 2 to 5 wherein the encoded output provided is adapted to be played using a computer system.
7. A method of encoding as claimed in any one of claims 2 to 6 wherein the

encoded output is distributed to users over a computer network.

8. A method of encoding as claimed in any one of claims 2 to 7 wherein apparatus used to provide the encoded output forms a videoconference endpoint.
9. A method of encoding as claimed in any previous claim wherein a read protocol signal provides information regarding any combination of following parameters associated with an audio visual signal of a videoconference transmission;
 - (i) audio codec employed and/or
 - (ii) video codec employed and/or
 - (iii) the bit rate of audio information supplied and/or
 - (iv) the bit rate of video information supplied and/or
 - (v) the video information frame rate and/or
 - (vi) the video information resolution.
10. A method of encoding as claimed in any previous claim wherein the content of a read protocol signal is used to detect the time position of at least one keyframe present within an audio visual signal of the videoconference transmission.
11. A method of encoding as claimed in claim 10 wherein keyframes are encoded into the encoded output at the same time position as keyframes are detected in an audio visual signal of the videoconference transmission.
12. A method of encoding as claimed in any previous claim wherein the contents of said at least one read protocol signal indicates a content switch present

within an audio visual signal of the videoconference transmission.

13. A method of encoding as claimed in claim 12, wherein a content switch is detected from a freeze picture signal extracted from a protocol signal.
14. A method of encoding as claimed in claim 12, wherein a content switch is detected from the removal of a freeze picture request signal extracted from a protocol signal.
15. A method of encoding as claimed in claim 12, wherein a content switch is detected from a document camera signal extraction from a protocol signal.
16. A method of encoding as claimed in claim 12, wherein a content switch is detected from the removal of a document camera signal extraction from a protocol signal.
17. A method of encoding as claimed in claim 12, wherein a content switch is detected from an image incorporation signal extracted from a protocol signal.
18. A method of encoding as claimed in claim 12, wherein a content switch is detected from the removal of an image incorporation signal extracted from a protocol signal.
19. A method of encoding as claimed in claim 12, wherein a content switch is detected from a camera movement signal extracted from a protocol signal.
20. A method of encoding as claimed in any one of claims 12 to 19, wherein the detection of a content switch triggers the association of at least one index marker with the encoded output at the corresponding time position in the encoded output at which the content switch was detected.
21. A method of encoding as claimed in claim 20, wherein an index marker includes reference information indicating what content switch was detected.

22. A method of encoding as claimed in any one of claims 20 or 21, wherein a protocol signal indicates the time position of at least one keyframe present within an audio visual signal of the videoconference transmission, and wherein keyframes encoded into the encoded output are positioned adjacent to or in the same position as index markers encoded into said output.
23. A method of encoding as claimed in claim 22, wherein keyframes encoded into the encoded output provided are positioned within a threshold time from an index marker.
24. A method of encoding as claimed in claim 22, wherein keyframes are encoded at the same time position as index markers.
25. A method of encoding as claimed in any one of claims 2 to 24, wherein encoded output audio visual content is time compressed when a low content state is detected from a received protocol signal.
26. A method of encoding as claimed in claim 25, wherein a buffer is used to time compress the audio visual content of the encoded output.
27. A method of encoding audio visual media signals characterised by the steps of:
 - (i) receiving a videoconference transmission from a computer network, said videoconference transmission including at least one audio visual signal and at least one protocol signal, and
 - (ii) reading one or more protocol signals, and
 - (iii) determining the time position of a keyframe present within an audio visual signal received, and
 - (iv) encoding a keyframe into the encoded output at the same time position

at which the keyframe was detected in the original received audio visual signal.

28. A method of encoding audio visual media signals, characterised by the steps of:

- (i) receiving a videoconference transmission from a computer network, said videoconference transmission including at least one audio visual signal and at least one protocol signal, and
- (ii) reading one or more protocol signals, and
- (iii) detecting a content switch within the audio visual content of a received audio visual signal or signals, and
- (iv) encoding an index marker at the time position at which the content switch was detected.

29. A method of encoding as claimed in claim 28 wherein index markers are encoded within a time threshold from the time position of a keyframe.

30. According to a further aspect of the present invention there is provided a method of encoding audio visual media signals substantially as described above characterised by the steps of:

- (i) receiving a videoconference transmission, from a computer network, said videoconference transmission including at least one audio visual signal and at least one protocol signal, and
- (ii) reading one or more protocol signals, and
- (iii) detecting a content switch within the audio visual content of a received audio visual signal, and

- (iv) encoding a keyframe and
- (v) encoding an index marker at the same time position or adjacent to the time position of the keyframe encoded.

31. A method of encoding audio visual media signals characterised by the steps of:

- (i) receiving a videoconference transmission from a computer network, said videoconference transmission including at least one audio visual signal and at least one protocol signal, and
- (ii) reading one or more protocol signals, and
- (iii) detecting the existence of a low content state present within a received audio visual signal or signals, and
- (iv) time compressing the encoded output content during the time period in which said low content state is detected within the videoconference transmission received.

32. A method of encoding as claimed in claim 31 wherein a buffer is used to receive videoconference transmission signals whereby the rate at which the contents of the buffer is played out to an encoding process determines the degree of time compression applied to the original videoconference content when encoded.

33. A method of encoding audio visual media signals characterised by the steps of:

- (i) receiving a videoconference transmission from a computer network, said videoconference transmission including at least one audio visual signal and at least one protocol signal, and

- (ii) reading one or more protocol signals to determine the encoding characteristics of the received videoconference transmission,
- (iii) receiving encoding preferences from at least one user, and
- (iv) selecting from a set of encoding processes a subset of encoding processes which can be implemented using the user's preferences and the encoding characteristics, and
- (v) displaying the subset of encoding processes to a user.

34. A method of encoding audio visual signals substantially as herein described with reference to and as illustrated by the accompanying drawings and/or examples.

35. Audio visual signal encoding apparatus substantially as herein described with reference to and as illustrated by the accompanying drawings and/or examples.

36. Computer software adapted to implement a method of encoding audio visual signals substantially as herein described with reference to and as illustrated by the accompanying drawings and/or examples.